EG&G Idaho, Inc
FORM EG&G-2631 (Rev. 12-88)

Project File Number WAG10-0501
EDF Serial Number ERP-WAG10-06
Functional File Number _____

ENGINEERING DESIGN FILE

Project/Task OU 10-05 Interim Action
Subtask Risk Assessment Codes
EDF Page ___ of ___

Subject : Risk Assessment Codes for Ordnance Interim Action of Operable Unit 10-05

Abstract:

This Engineering Design File (EDF) consists of the completed Risk Assessment Code forms for the six ordnance locations at the Idaho National Engineering Laboratory (INEL) proposed for the Operable Unit 10-05 Interim Action. This risk assessment procedure was developed by the U. S. Department of Defense to evaluate the public risks of ordnance locations and to prioritize these sites for remediation. A copy of this procedure is included in this EDF for reference.

The attached Risk Assessment Code forms document the evaluation of the following ordnance locations at the INEL:

1) Central Facilities Area (CFA) Gravel Pit (CFA-9)
2) Storage Bunkers North of Idaho Chemical Processing Plant (ICPP)
3) National Oceanic and Atmospheric Administration (NOAA) Grid
4) CFA-633 Area
5) Fire Station II Zone
6) Power Line Road

Distribution (complete package): V. W. Watson, MS 3902
L. V. Street, MS 1545
OU 10-05 Admin. Record
ERP ARDC

Distribution (cover sheet only): Project EDF file log, EDF serial no. log

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RISK ASSESSMENT PROCEDURES FOR EXPLOSIVE ORDNANCE (EXO)

Site Name: CFA-9 Gravel Pit
Location: INEL/CFA
RAC Score: RAC 2

Rater's Name: M. Lusk
Organization: EG&G 7980
Date: 17 Oct 1991

EXO RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The EXO risk assessment is based upon documented evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE

A. Conventional Ordnance and Ammunition

	YES VALUE	NO VALUE	VALUE
Small Arms (.22 cal - .50 cal)	2	0	0
Medium/Large Caliber (20 mm and larger)	10	0	10
Bombs, Explosive	10	0	0
Bombs, Practice (w/spotting charges)	6	0	0
Grenades, Hand and Rifle, Explosive	10	0	0
Grenades, Practice (w/spotting charges)	6	0	0
Landmines, Explosive	10	0	0
Landmines, Practice (w/spotting charges)	6	0	0
Rockets, Guided Missiles, Explosive	10	0	0

Detonators, Blasting Caps	10	0	0
Demolition Charges	10	0	0

Conventional Ordnance and Ammunition ORS Value (Maximum of 10). 10

B. Pyrotechnics

	YES VALUE	NO VALUE	VALUE
Any Munition Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10	0	0
Any Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethlaluminum Metal Incendiaries)	6	0	0
Military Flares	4	0	0

Pyrotechnics Value (Maximum of 10) 0

C. Bulk High Explosives (Bulk explosives not an integral part of conventional ordnance).

	YES VALUE	NO VALUE	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	0
Booster, Bursting or Fuse Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	10	0	0
Military Dynamite	10	0	0
Less Sensitive explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	0

High Explosives Value (Maximum value of 10). 0

D. Propellants

	YES VALUE	NO VALUE	VALUE	
Solid or Liquid Propellants	6	0	0	0

E. Chemical Agent/Weapons

	YES VALUE	NO VALUE	VALUE
Radiological	25	0	0
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	0
Incapacitating Agent (BZ)	10	0	0
Riot Control and Miscellaneous (Vomiting, Tear, Chlorine, Mustard Simulant)	5	0	0
Any Munition Containing Smoke, Illumination, Signal Charge	4	0	0

Chemical Agent/Weapons Value (Maximum 25). 0

Total Ordnance and Explosive Waste Characteristics Value (Total = A + B + C +D + E with a Maximum value of 61). 10

TABLE 1

HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	II	≥13 <21
MARGINAL	***III***	***≥ 5 <13***
NEGLIGIBLE	IV	< 5

* Apply Hazard Severity to Table 3.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

A. Locations of Contamination	YES VALUE	NO VALUE	VALUE
Within Tanks, Pipes, Vessels or Other confined locations.	5	0	0
On the surface or within 3 feet.	5	0	5
Inside walls, ceilings, or other parts of Buildings or Structures.	4	0	0
Subsurface, greater than 3 feet in depth.	3	0	0

Value for location of UXO. (Maximum Value of 5). 5

B. Distance to nearest inhabited locations or structures likely to be at risk from EXO site (roads, parks, playgrounds, and buildings).

Distance to Nearest Target	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
2.0 miles to 5.0 miles	1
Over 5.0 miles	0

Distance to Persons Value (Maximum Value of 5). 5

C. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary.

Number of Buildings	VALUE
0	0
1 to 10	1
11 to 50	2

51 to 100	3
101 to 250	4
251 or Over	5

Number of Buildings Value (Maximum Value of 5). 3

D. Types of Buildings

	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

Types of Buildings Value (Maximum Value of 5). 4

E. Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Use the following guidance:

Barrier	Assigned Value
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility;	0
OR	
An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0
Security guard, but no barrier	1
A barrier, (any kind of fence) but no separate means to control entry	2

Barriers do not completely surround the facility	3	
No barrier or security system	5	
Accessibility Value (Maximum Value of 5).		5

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE	
None Anticipated	0	
Expected	5	
(Maximum Value of 5)		5

Total value for hazard probability. Sum of Values A through F (Not to exceed 30). Apply this value to Hazard Probability Table 2 to determine Hazard Level. 27

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	***A***	***≥27***
PROBABLE	B	≥21 <27
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	< 8

* Apply Hazard Probability to Table 3.

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

HAZARD SEVERITY - III (from Table 1)

HAZARD PROBABILITY - A (from Table 2)

TABLE 3

RISK ASSESSMENT CODE (RAC)

Probability Level:		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RAC 1 Imminent Hazard - Emergency action required to mitigate the hazard or protect personnel (i.e., fencing, physical barrier, guards, etc.).

RAC 2 Action required to mitigate hazard or protect personnel. Feasibility study is appropriate.

RAC 3 Action required to evaluate potential threat to personnel. High priority confirmation study is appropriate.

RAC 4 Action required to evaluate potential threat to personnel. Confirmation study is appropriate.

RAC 5 No action required.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.

One five inch naval artillery shell was placed in this location at the Central Facilities Area (CFA) gravel pit. The shell later became buried by a slumped gravel pit wall. The approximate location of the shell has been verified using a magnetometer and the area is now marked with a sign to warn personnel of the potential hazard. The potential exists of finding more ordnance in the vicinity of this location. This area is just downrange from the former CF 633 firing site where the Navy test fired artillery. It is also adjacent to an area which is planned for future development that will include facility construction and road upgrades.

RISK ASSESSMENT PROCEDURES FOR EXPLOSIVE ORDNANCE (EXO)

Site Name: Storage Bunkers N of ICPP
Location: INEL/ICPP
RAC Score: RAC 2

Rater's Name: M. Lusk
Organization: EG&G 7980
Date: 17 Oct 1991

EXO RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The EXO risk assessment is based upon documented evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE

A. Conventional Ordnance and Ammunition	YES VALUE	NO VALUE	VALUE
Small Arms (.22 cal - .50 cal)	2	0	0
Medium/Large Caliber (20 mm and larger)	10	0	10
Bombs, Explosive	10	0	0
Bombs, Practice (w/spotting charges)	6	0	0
Grenades, Hand and Rifle, Explosive	10	0	0
Grenades, Practice (w/spotting charges)	6	0	0
Landmines, Explosive	10	0	10
Landmines, Practice (w/spotting charges)	6	0	0
Rockets, Guided Missiles, Explosive	10	0	0

Detonators, Blasting Caps	10	0	0
Demolition Charges	10	0	0

Conventional Ordnance and Ammunition ORS Value (Maximum of 10). 10

B. Pyrotechnics

	YES VALUE	NO VALUE	VALUE
Any Munition Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10	0	0
Any Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethlaluminum Metal Incendiaries)	6	0	0
Military Flares	4	0	0

Pyrotechnics Value (Maximum of 10) 0

C. Bulk High Explosives (Bulk explosives not an integral part of conventional ordnance).

	YES VALUE	NO VALUE	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	0
Booster, Bursting or Fuse Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	10	0	10
Military Dynamite	10	0	0
Less Sensitive explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	0

High Explosives Value (Maximum value of 10). 10

D. Propellants

	YES VALUE	NO VALUE	VALUE	
Solid or Liquid Propellants	6	0	0	0

E. Chemical Agent/Weapons

	YES VALUE	NO VALUE	VALUE
Radiological	25	0	0
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	0
Incapacitating Agent (BZ)	10	0	0
Riot Control and Miscellaneous (Vomiting, Tear, Chlorine, Mustard Simulant)	5	0	0
Any Munition Containing Smoke, Illumination, Signal Charge	4	0	0

Chemical Agent/Weapons Value (Maximum 25). 0

Total Ordnance and Explosive Waste Characteristics Value (Total = A + B + C +D + E with a Maximum value of 61). 20

TABLE 1

HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	***II***	***≥13 <21***
MARGINAL	III	≥ 5 <13
NEGLIGIBLE	IV	< 5

* Apply Hazard Severity to Table 3.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

A. Locations of Contamination	YES VALUE	NO VALUE	VALUE
Within Tanks, Pipes, Vessels or Other confined locations.	5	0	0
On the surface or within 3 feet.	5	0	5
Inside walls, ceilings, or other parts of Buildings or Structures.	4	0	4
Subsurface, greater than 3 feet in depth.	3	0	0

Value for location of UXO. (Maximum Value of 5). 5

B. Distance to nearest inhabited locations or structures likely to be at risk from EXO site (roads, parks, playgrounds, and buildings).

Distance to Nearest Target	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
2.0 miles to 5.0 miles	1
Over 5.0 miles	0

Distance to Persons Value (Maximum Value of 5). 4

C. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary.

Number of Buildings	VALUE
0	0
1 to 10	1
11 to 50	2

51 to 100	3
101 to 250	4
251 or Over	5

Number of Buildings Value (Maximum Value of 5). 4

D. Types of Buildings	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

Types of Buildings Value (Maximum Value of 5). 4

E. Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Use the following guidance:

Barrier	Assigned Value
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility;	0
OR	
An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0
Security guard, but no barrier	1
A barrier, (any kind of fence) but no separate means to control entry	2

Barriers do not completely surround the facility	3	
No barrier or security system	5	
Accessibility Value (Maximum Value of 5).		5

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE	
None Anticipated	0	
Expected	5	
(Maximum Value of 5)		0

Total value for hazard probability. Sum of Values A through F (Not to exceed 30). Apply this value to Hazard Probability Table 2 to determine Hazard Level. 22

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥27
PROBABLE	*B*	*≥21 <27*
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	< 8

* Apply Hazard Probability to Table 3.

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

HAZARD SEVERITY - II (from Table 1)

HAZARD PROBABILITY - B (from Table 2)

TABLE 3

RISK ASSESSMENT CODE (RAC)

Probability Level:		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RAC 1 Imminent Hazard - Emergency action required to mitigate the hazard or protect personnel (i.e., fencing, physical barrier, guards, etc.).

RAC 2 Action required to mitigate hazard or protect personnel. Feasibility study is appropriate.

RAC 3 Action required to evaluate potential threat to personnel. High priority confirmation study is appropriate.

RAC 4 Action required to evaluate potential threat to personnel. Confirmation study is appropriate.

RAC 5 No action required.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.

This area is one-fourth to one mile north of the Idaho Chemical Processing Plant (ICPP). At least two explosive storage magazines were destroyed in Navy tests. Another bunker still exists at this location. Numerous five inch artillery shells, anti-tank mines, and high explosives have been found in this area. This area is close to ICPP and adjacent to Lincoln Blvd., a major INEL transportation route.

RISK ASSESSMENT PROCEDURES FOR EXPLOSIVE ORDNANCE (EXO)

Site Name: NOAA Grid
Location: INEL
RAC Score: RAC 2

Rater's Name: M. Lusk
Organization: EG&G 7980
Date: 17 Oct 1991

EXO RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The EXO risk assessment is based upon documented evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE

A. Conventional Ordnance and Ammunition

	YES VALUE	NO VALUE	VALUE
Small Arms (.22 cal - .50 cal)	2	0	0
Medium/Large Caliber (20 mm and larger)	10	0	10
Bombs, Explosive	10	0	0
Bombs, Practice (w/spotting charges)	6	0	0
Grenades, Hand and Rifle, Explosive	10	0	0
Grenades, Practice (w/spotting charges)	6	0	0
Landmines, Explosive	10	0	0
Landmines, Practice (w/spotting charges)	6	0	0
Rockets, Guided Missiles, Explosive	10	0	0

Detonators, Blasting Caps	10	0	0
Demolition Charges	10	0	0

Conventional Ordnance and Ammunition ORS Value (Maximum of 10). 10

B. Pyrotechnics

	YES VALUE	NO VALUE	VALUE
Any Munition Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10	0	0
Any Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethlaluminum Metal Incendiaries)	6	0	0
Military Flares	4	0	0

Pyrotechnics Value (Maximum of 10) 0

C. Bulk High Explosives (Bulk explosives not an integral part of conventional ordnance).

	YES VALUE	NO VALUE	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	0
Booster, Bursting or Fuse Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	10	0	10
Military Dynamite	10	0	0
Less Sensitive explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	0

High Explosives Value (Maximum value of 10). 10

D. Propellants

	YES VALUE	NO VALUE	VALUE	
Solid or Liquid Propellants	6	0	0	0

E. Chemical Agent/Weapons

	YES VALUE	NO VALUE	VALUE
Radiological	25	0	0
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	0
Incapacitating Agent (BZ)	10	0	0
Riot Control and Miscellaneous (Vomiting, Tear, Chlorine, Mustard Simulant)	5	0	0
Any Munition Containing Smoke, Illumination, Signal Charge	4	0	0

Chemical Agent/Weapons Value (Maximum 25). 0

Total Ordnance and Explosive Waste Characteristics Value (Total = A + B + C +D + E with a Maximum value of 61). 20

TABLE 1

HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	*II*	*≥13 <21*
MARGINAL	III	≥ 5 <13
NEGLIGIBLE	IV	< 5

* Apply Hazard Severity to Table 3.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

A. Locations of Contamination	YES VALUE	NO VALUE	VALUE
Within Tanks, Pipes, Vessels or Other confined locations.	5	0	0
On the surface or within 3 feet.	5	0	5
Inside walls, ceilings, or other parts of Buildings or Structures.	4	0	0
Subsurface, greater than 3 feet in depth.	3	0	0

Value for location of UXO. (Maximum Value of 5). 5

B. Distance to nearest inhabited locations or structures likely to be at risk from EXO site (roads, parks, playgrounds, and buildings).

Distance to Nearest Target	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
2.0 miles to 5.0 miles	1
Over 5.0 miles	0

Distance to Persons Value (Maximum Value of 5). 5

C. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary.

Number of Buildings	VALUE
0	0
1 to 10	1
11 to 50	2

51 to 100	3
101 to 250	4
251 or Over	5

Number of Buildings Value (Maximum Value of 5). 3

D. Types of Buildings

	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

Types of Buildings Value (Maximum Value of 5). 4

E. Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Use the following guidance:

Barrier	Assigned Value
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility;	0
OR	
An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0
Security guard, but no barrier	1
A barrier, (any kind of fence) but no separate means to control entry	2

Barriers do not completely surround the facility	3	
No barrier or security system	5	
Accessibility Value (Maximum Value of 5).		5

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE	
None Anticipated	0	
Expected	5	
(Maximum Value of 5)		0

Total value for hazard probability. Sum of Values A through F (Not to exceed 30). Apply this value to Hazard Probability Table 2 to determine Hazard Level. 22

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥27
PROBABLE	***B***	***≥21 <27***
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	< 8

* Apply Hazard Probability to Table 3.

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

HAZARD SEVERITY - II (from Table 1)

HAZARD PROBABILITY - B (from Table 2)

TABLE 3

RISK ASSESSMENT CODE (RAC)

Probability Level:		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RAC 1 Imminent Hazard - Emergency action required to mitigate the hazard or protect personnel (i.e., fencing, physical barrier, guards, etc.).

RAC 2 Action required to mitigate hazard or protect personnel. Feasibility study is appropriate.

RAC 3 Action required to evaluate potential threat to personnel. High priority confirmation study is appropriate.

RAC 4 Action required to evaluate potential threat to personnel. Confirmation study is appropriate.

RAC 5 No action required.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.

This location is east of the Test Reactor Area (TRA) and north of the Idaho Chemical Processing Plant. This area is used by the National Oceanic and Atmospheric Administration (NOAA) for atmospheric testing by releasing chemical agents from the a 200 ft. tower at the center and monitoring their transport off-site. Many bomb or artillery craters have been observed at the NOAA grid, along with numerous five inch artillery shells and chunks of high explosive, mainly TNT.

RISK ASSESSMENT PROCEDURES FOR
EXPLOSIVE ORDNANCE (EXO)

Site Name: CFA-633 Area
Location: INEL/CFA
RAC Score: RAC 1

Rater's Name: M. Lusk
Organization: EG&G 7980
Date: 17 Oct 1991

EXO RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The EXO risk assessment is based upon documented evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE

A. Conventional Ordnance and Ammunition

	YES VALUE	NO VALUE	VALUE
Small Arms (.22 cal - .50 cal)	2	0	0
Medium/Large Caliber (20 mm and larger)	10	0	10
Bombs, Explosive	10	0	0
Bombs, Practice (w/spotting charges)	6	0	0
Grenades, Hand and Rifle, Explosive	10	0	0
Grenades, Practice (w/spotting charges)	6	0	0
Landmines, Explosive	10	0	0
Landmines, Practice (w/spotting charges)	6	0	0
Rockets, Guided Missiles, Explosive	10	0	0

Detonators, Blasting Caps	10	0	10
Demolition Charges	10	0	0

Conventional Ordnance and Ammunition ORS Value (Maximum of 10). 10

B. Pyrotechnics

	YES VALUE	NO VALUE	VALUE
Any Munition Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10	0	0
Any Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethlaluminum Metal Incendiaries)	6	0	0
Military Flares	4	0	0

Pyrotechnics Value (Maximum of 10) 0

C. Bulk High Explosives (Bulk explosives not an integral part of conventional ordnance).

	YES VALUE	NO VALUE	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	0
Booster, Bursting or Fuse Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	10	0	10
Military Dynamite	10	0	0
Less Sensitive explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	0

High Explosives Value (Maximum value of 10). 10

D. Propellants

	YES VALUE	NO VALUE	VALUE	
Solid or Liquid Propellants	6	0	0	0

E. Chemical Agent/Weapons

	YES VALUE	NO VALUE	VALUE
Radiological	25	0	0
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	0
Incapacitating Agent (BZ)	10	0	0
Riot Control and Miscellaneous (Vomiting, Tear, Chlorine, Mustard Simulant)	5	0	0
Any Munition Containing Smoke, Illumination, Signal Charge	4	0	0

Chemical Agent/Weapons Value (Maximum 25). 0

Total Ordnance and Explosive Waste Characteristics Value (Total = A + B + C +D + E with a Maximum value of 61). 20

TABLE 1

HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	***II***	***≥13 <21***
MARGINAL	III	≥ 5 <13
NEGLIGIBLE	IV	< 5

* Apply Hazard Severity to Table 3.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

A. Locations of Contamination	YES VALUE	NO VALUE	VALUE
Within Tanks, Pipes, Vessels or Other confined locations.	5	0	0
On the surface or within 3 feet.	5	0	5
Inside walls, ceilings, or other parts of Buildings or Structures.	4	0	4
Subsurface, greater than 3 feet in depth.	3	0	0

Value for location of UXO. (Maximum Value of 5). 5

B. Distance to nearest inhabited locations or structures likely to be at risk from EXO site (roads, parks, playgrounds, and buildings).

Distance to Nearest Target	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
2.0 miles to 5.0 miles	1
Over 5.0 miles	0

Distance to Persons Value (Maximum Value of 5). 5

C. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary.

Number of Buildings	VALUE
0	0
1 to 10	1
11 to 50	2

51 to 100	3
101 to 250	4
251 or Over	5

Number of Buildings Value (Maximum Value of 5). 3

D. Types of Buildings	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

Types of Buildings Value (Maximum Value of 5). 4

E. Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Use the following guidance:

Barrier	Assigned Value
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility;	0
OR	
An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0
Security guard, but no barrier	1
A barrier, (any kind of fence) but no separate means to control entry	2

Barriers do not completely surround the facility	3	
No barrier or security system	5	
Accessibility Value (Maximum Value of 5).		5

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE	
None Anticipated	0	
Expected	5	
(Maximum Value of 5)		5

Total value for hazard probability. Sum of Values A through F (Not to exceed 30). Apply this value to Hazard Probability Table 2 to determine Hazard Level. 27

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	***A***	***≥27***
PROBABLE	B	≥21 <27
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	< 8

* Apply Hazard Probability to Table 3.

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

HAZARD SEVERITY - II (from Table 1)

HAZARD PROBABILITY - A (from Table 2)

TABLE 3

RISK ASSESSMENT CODE (RAC)

Probability Level:		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RAC 1 ***Imminent Hazard - Emergency action required to mitigate the hazard or protect personnel (i.e., fencing, physical barrier, guards, etc.).***

RAC 2 Action required to mitigate hazard or protect personnel. Feasibility study is appropriate.

RAC 3 Action required to evaluate potential threat to personnel. High priority confirmation study is appropriate.

RAC 4 Action required to evaluate potential threat to personnel. Confirmation study is appropriate.

RAC 5 No action required.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.

This area is in the vicinity of Central Facilities Area (CFA) building CF-633. The area was formerly used as a firing site for testing of naval artillery. Close-range firings were made into 16 ton concrete blocks that were transported by a gantry crane. Long-range firings were made toward the northeast for distances up to twenty-nine miles, depending on the size of the gun being tested. Numerous ordnance have been found in this area, including various sizes of artillery shells, pieces of torpedoes, and smokeless powder. One five inch naval artillery shell was inadvertently placed inside a French drain, approximately twenty-five feet in depth. The drain is was later backfilled with soil and cement capped. This area includes the Scoville electric substation, currently occupied buildings, and buildings scheduled for demolition in the near future.

RISK ASSESSMENT PROCEDURES FOR
EXPLOSIVE ORDNANCE (EXO)

Site Name: Fire Station II Zone
Location: INEL
RAC Score: RAC 2

Rater's Name: M. Lusk
Organization: EG&G 7980
Date: 17 Oct 1991

EXO RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The EXO risk assessment is based upon documented evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE

A. Conventional Ordnance and Ammunition

	YES VALUE	NO VALUE	VALUE
Small Arms (.22 cal - .50 cal)	2	0	0
Medium/Large Caliber (20 mm and larger)	10	0	10
Bombs, Explosive	10	0	0
Bombs, Practice (w/spotting charges)	6	0	0
Grenades, Hand and Rifle, Explosive	10	0	0
Grenades, Practice (w/spotting charges)	6	0	0
Landmines, Explosive	10	0	0
Landmines, Practice (w/spotting charges)	6	0	0
Rockets, Guided Missiles, Explosive	10	0	0

Detonators, Blasting Caps	10	0	0
Demolition Charges	10	0	0

Conventional Ordnance and Ammunition ORS Value (Maximum of 10). 10

B. Pyrotechnics

	YES VALUE	NO VALUE	VALUE
Any Munition Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10	0	0
Any Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethlaluminum Metal Incendiaries)	6	0	0
Military Flares	4	0	0

Pyrotechnics Value (Maximum of 10) 0

C. Bulk High Explosives (Bulk explosives not an integral part of conventional ordnance).

	YES VALUE	NO VALUE	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	0
Booster, Bursting or Fuse Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	10	0	10
Military Dynamite	10	0	0
Less Sensitive explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	0

High Explosives Value (Maximum value of 10). 10

D. Propellants

	YES VALUE	NO VALUE	VALUE	
Solid or Liquid Propellants	6	0	0	0

E. Chemical Agent/Weapons

	YES VALUE	NO VALUE	VALUE
Radiological	25	0	0
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	0
Incapacitating Agent (BZ)	10	0	0
Riot Control and Miscellaneous (Vomiting, Tear, Chlorine, Mustard Simulant)	5	0	0
Any Munition Containing Smoke, Illumination, Signal Charge	4	0	0

Chemical Agent/Weapons Value (Maximum 25). 0

Total Ordnance and Explosive Waste Characteristics Value (Total = A + B + C +D + E with a Maximum value of 61). 20

TABLE 1

HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	***II***	***≥13 <21***
MARGINAL	III	≥ 5 <13
NEGLIGIBLE	IV	< 5

* Apply Hazard Severity to Table 3.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

A. Locations of Contamination	YES VALUE	NO VALUE	VALUE
Within Tanks, Pipes, Vessels or Other confined locations.	5	0	0
On the surface or within 3 feet.	5	0	5
Inside walls, ceilings, or other parts of Buildings or Structures.	4	0	0
Subsurface, greater than 3 feet in depth.	3	0	0

Value for location of UXO. (Maximum Value of 5). 5

B. Distance to nearest inhabited locations or structures likely to be at risk from EXO site (roads, parks, playgrounds, and buildings).

Distance to Nearest Target	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
2.0 miles to 5.0 miles	1
Over 5.0 miles	0

Distance to Persons Value (Maximum Value of 5). 5

C. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary.

Number of Buildings	VALUE
0	0
1 to 10	1
11 to 50	2

51 to 100	3
101 to 250	4
251 or Over	5

Number of Buildings Value (Maximum Value of 5). 4

D. Types of Buildings

	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

Types of Buildings Value (Maximum Value of 5). 4

E. Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Use the following guidance:

Barrier	Assigned Value
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility;	0
OR	
An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0
Security guard, but no barrier	1
A barrier, (any kind of fence) but no separate means to control entry	2

Barriers do not completely surround the facility	3	
No barrier or security system	5	
Accessibility Value (Maximum Value of 5).		5

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE	
None Anticipated	0	
Expected	5	
(Maximum Value of 5)		0

Total value for hazard probability. Sum of Values A through F (Not to exceed 30). Apply this value to Hazard Probability Table 2 to determine Hazard Level. 23

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥27
PROBABLE	*B*	*≥21 <27*
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	< 8

* Apply Hazard Probability to Table 3.

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

HAZARD SEVERITY - II (from Table 1)

HAZARD PROBABILITY - B (from Table 2)

TABLE 3

RISK ASSESSMENT CODE (RAC)

Probability Level:		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RAC 1 Imminent Hazard - Emergency action required to mitigate the hazard or protect personnel (i.e., fencing, physical barrier, guards, etc.).

RAC 2 Action required to mitigate hazard or protect personnel. Feasibility study is appropriate.

RAC 3 Action required to evaluate potential threat to personnel. High priority confirmation study is appropriate.

RAC 4 Action required to evaluate potential threat to personnel. Confirmation study is appropriate.

RAC 5 No action required.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.

This area is in the vicinity of Fire Station II, located along Lincoln Blvd. northeast of the Test Reactor Area (TRA) and north of the Idaho Chemical Processing Plant (ICPP). Numerous ordnance, including anti-tank mines, live fuses, and chunks of high explosive, have been observed in this area. The origin of the ordnance is not clear. The area is an active INEL fire station, is also used for fire training of personnel, and is adjacent to a major INEL transportation route.

RISK ASSESSMENT PROCEDURES FOR
EXPLOSIVE ORDNANCE (EXO)

Site Name: Power Line Road
Location: INEL
RAC Score: RAC 2

Rater's Name: M. Lusk
Organization: EG&G 7980
Date: 17 Oct 1991

EXO RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The EXO risk assessment is based upon documented evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE

A. Conventional Ordnance and Ammunition	YES VALUE	NO VALUE	VALUE
Small Arms (.22 cal - .50 cal)	2	0	0
Medium/Large Caliber (20 mm and larger)	10	0	10
Bombs, Explosive	10	0	0
Bombs, Practice (w/spotting charges)	6	0	0
Grenades, Hand and Rifle, Explosive	10	0	0
Grenades, Practice (w/spotting charges)	6	0	0
Landmines, Explosive	10	0	0
Landmines, Practice (w/spotting charges)	6	0	0
Rockets, Guided Missiles, Explosive	10	0	0

Detonators, Blasting Caps	10	0	0
Demolition Charges	10	0	0

Conventional Ordnance and Ammunition ORS Value (Maximum of 10). 10

B. Pyrotechnics

	YES VALUE	NO VALUE	VALUE
Any Munition Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10	0	0
Any Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethlaluminum Metal Incendiaries)	6	0	0
Military Flares	4	0	0

Pyrotechnics Value (Maximum of 10) 0

C. Bulk High Explosives (Bulk explosives not an integral part of conventional ordnance).

	YES VALUE	NO VALUE	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	0
Booster, Bursting or Fuse Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	10	0	10
Military Dynamite	10	0	0
Less Sensitive explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	0

High Explosives Value (Maximum value of 10). 10

D. Propellants

	YES VALUE	NO VALUE	VALUE	
Solid or Liquid Propellants	6	0	0	0

E. Chemical Agent/Weapons

	YES VALUE	NO VALUE	VALUE
Radiological	25	0	0
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	0
Incapacitating Agent (BZ)	10	0	0
Riot Control and Miscellaneous (Vomiting, Tear, Chlorine, Mustard Simulant)	5	0	0
Any Munition Containing Smoke, Illumination, Signal Charge	4	0	0

Chemical Agent/Weapons Value (Maximum 25). 0

Total Ordnance and Explosive Waste Characteristics Value (Total = A + B + C +D + E with a Maximum value of 61). 20

TABLE 1

HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	*II*	*≥13 <21*
MARGINAL	III	≥ 5 <13
NEGLIGIBLE	IV	< 5

* Apply Hazard Severity to Table 3.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

A. Locations of Contamination	YES VALUE	NO VALUE	VALUE
Within Tanks, Pipes, Vessels or Other confined locations.	5	0	0
On the surface or within 3 feet.	5	0	5
Inside walls, ceilings, or other parts of Buildings or Structures.	4	0	0
Subsurface, greater than 3 feet in depth.	3	0	0

Value for location of UXO. (Maximum Value of 5). 5

B. Distance to nearest inhabited locations or structures likely to be at risk from EXO site (roads, parks, playgrounds, and buildings).

Distance to Nearest Target	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
2.0 miles to 5.0 miles	1
Over 5.0 miles	0

Distance to Persons Value (Maximum Value of 5). 3

C. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary.

Number of Buildings	VALUE
0	0
1 to 10	1
11 to 50	2

51 to 100	3
101 to 250	4
251 or Over	5

Number of Buildings Value (Maximum Value of 5). 4

D. Types of Buildings	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

Types of Buildings Value (Maximum Value of 5). 4

E. Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Use the following guidance:

Barrier	Assigned Value
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility;	0
OR	
An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0
Security guard, but no barrier	1
A barrier, (any kind of fence) but no separate means to control entry	2

Barriers do not completely surround the facility	3	
No barrier or security system	5	
Accessibility Value (Maximum Value of 5).		5

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE	
None Anticipated	0	
Expected	5	
(Maximum Value of 5)		0

Total value for hazard probability. Sum of Values A through F (Not to exceed 30). Apply this value to Hazard Probability Table 2 to determine Hazard Level. 21

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥27
PROBABLE	*B*	*≥21 <27*
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	< 8

* Apply Hazard Probability to Table 3.

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

HAZARD SEVERITY - II (from Table 1)

HAZARD PROBABILITY - B (from Table 2)

TABLE 3

RISK ASSESSMENT CODE (RAC)

Probability Level:		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RAC 1 Imminent Hazard - Emergency action required to mitigate the hazard or protect personnel (i.e., fencing, physical barrier, guards, etc.).

RAC 2 Action required to mitigate hazard or protect personnel. Feasibility study is appropriate.

RAC 3 Action required to evaluate potential threat to personnel. High priority confirmation study is appropriate.

RAC 4 Action required to evaluate potential threat to personnel. Confirmation study is appropriate.

RAC 5 No action required.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.

This area includes the access road paralleling the Anaconda power line and a 100 ft. wide buffer zone on each side. The power line runs generally north and south several miles east of Lincoln Blvd. on the INEL. It is a major power line supplying power to the INEL, owned and maintained by Utah Power and Light Company. The power line runs through the downrange area of the former CF 633 firing site. Numerous artillery shells of various sizes and fuses have been observed within this area. Most of the shells showed evidence of being fired through an artillery barrel, but some were of unknown origin.